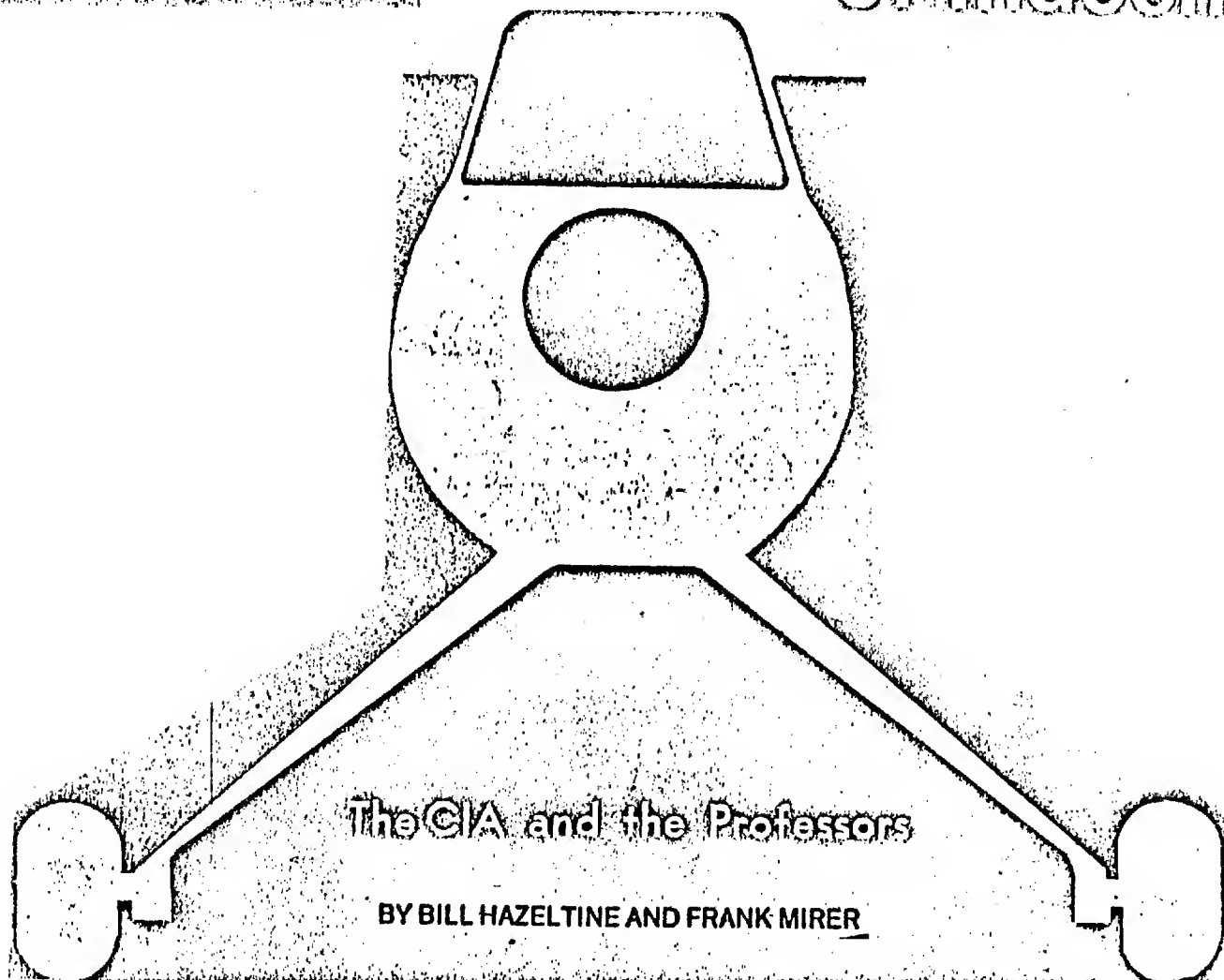


From the
Tennis
Courts of MIT

To The
Hills
of Indochina



Continued

"We had lots of dealings with the CIA. You should have seen those planes. They'd go out looking like the kind of plane the bad guy on a TV show would fly--painted black with no markings. They'd take off from Westover Air Force Base and that was the last we ever saw of them."

--Otto Koppen, former director of the MIT Aeronautics Lab and co-founder of the Helio Aircraft Co.

On October 26, the Pentagon announced that the Helio Aircraft Co. of Bedford, Mass. had been awarded a \$3,398,750 contract to supply 15 planes to the Air Force for testing. If the tests go well, the U.S. will give as many as 3,000 of the Helio planes, equipped as mini-gunships, to the South Vietnamese government.

In the late fifties and early sixties, the CIA used the Helio Courier--an amazing short take-off and landing (STOL) plane which can fly at speeds as slow as 35 mph--to build a clandestine army in Laos.

The story of the Helio Co. explains a lot about the present phase of the war--both on the battle and the home fronts--and about the military-industrial-academic complex. The connections of Harvard, MIT and other local universities with the Air Force at Hanscom Field and with such Route 128 contractors as RCA, Raytheon, Sylvania, MITRE, etc. are fairly well known--but the extraordinary story of Helio and how two Cambridge professors ended up building planes for the CIA and the Air Force has not, as yet, come to light.

First let's look at the recent contract.

President Nixon's plan is to maintain American military presence in Southeast Asia with the loss of as few American lives as possible. As troops come home, the administration has increased the use of air power. As part of this strategy, the Helio mini-gunship is supposed to provide the Saigon regime (to quote a military trade journal) with an "anti-infiltration capability of its own." The Pentagon has decided to supply the South Vietnamese with this plane instead of helicopters because it is much easier to maintain.

Helio is eager to help out. Its "Stallion" model is in competition with another firm's aircraft, the Fairchild "Peacemaker." Congressman Robert Sikes of Florida recently complained about Helio on the grounds that the company is too small for a contract which might involve 3,000 planes. Despite his complaint, both Helio and Fairchild were awarded contracts to build 15 planes for test runs. Undoubtedly Helio's favorable location on the doorstep of Hanscom Field, the Air Force base that coordinates research on the air war over Laos and Cambodia, helped to obtain the initial contract.

The planes will be taken to Indochina for a flyoff this spring in the project dubbed CREDIBLE CHASE. American, Thai, and South Vietnamese pilots will participate in the tests, which are expected to take about 60 days.

The Air Force proposal for the two planes grew out of the PAVE COIN tests of various counter-guerrilla aircraft. The planes have already undergone preliminary tests. They were tested from May 18 to 21 at Eglin Air Force Base in Florida (just after Mayday) and from June 7 to July 15 in cargo and combat (i.e. bombing and strafing) maneuvers in Thailand and over the Ho Chi Minh Trail. Before the planes were tested the Air Force installed side-firing mini-guns, strengthened wing joints for bomb attachment, and added a radio and gunsight for the standard Stallion.

Lynn Bollinger, co-founder of the Helio Corporation, is reluctant to discuss the recent contract. The terms of the contract, he says, only allow him to state that Helio received a 3.4 million dollar contract to build 15 planes for the Air Force. During our first interview, he said that to his knowledge the only arms his planes had ever carried were the "45's strapped to the pilot's hip." In a second interview, after the congressional hearings had been released, Bollinger said that "I learned as much as you did from those hearings." This is surprising: the Air Force obtained passports and paid the way to Thailand for a Helio pilot and an engineer for the test last summer, and since Helio now has a field representative on full time duty at Eglin Air Force Base where the Air Force is readying the planes for the spring tests.

From the U.S. point of view, the Helio plane has the advantage that it forces the South Vietnamese to fight on U.S. terms. The armed STOL plane is perfect for this role not only because it is a relatively cheap and "low profile" weapon, but also because it is useful only when integrated into the U.S. command control structure.

This new force is not intended to replace U.S. air power, just to supplement it. In his news conference of November 13, President Nixon said, "Well, air power of course, as far as our use of it is concerned, will continue longer than our ground forces, due to the fact that training Vietnamese to handle aircraft takes the longest lead time and we will continue to use it until there is a negotiated settlement..." The Vietnamese aren't to be supplied with sophisticated jet bombers. Apart from the questions of maintenance and training, such a step would place too much power in Saigon's hands, by allowing them to carry on an independent military strategy - for example, bombing the North at their own initiative.

This is not to say that the converted Stallion will not be a deadly weapon. Recent advances in military technology pioneered in the Boston area, have made light planes into formidable war machines. The planes will be integrated into U.S. Air Force target selection and guidance network. This system uses elaborate electronics to keep Laos and Cambodia under constant surveillance and to guide planes to targets. The planes will be equipped with special night observation devices to help them attack men and trucks at night. They will be armed with three barrel 20 mm rapid-fire gattling guns, 2.75 inch rockets and several new types of bombs, including TV bombs, laser bombs, and bombs which home in on a truck's ignition system.

The history of the Helio Company reveals much about the close relations between the Boston academic community and the local military industrial complex. The universities provided the skills and inspiration which guided the development of the first STOL plane.

The concept of STOL grew out of a report by Lynn Bollinger

prepared for a leading aircraft manufacturer on the entire small plane business just after WW II. At the time, Bollinger, was on the staff of the Harvard Business School as an expert in production and management in the aircraft industry. The study contained suggestions for the sort of plane that would be required for personal use. It would be a plane that could take off and land in a short distance and would not stall or spin.

During the study he met Otto C. Koppen, who since 1929 had been in charge of all MIT's aeronautics design courses and who was then director of the Aeronautics Lab at MIT. The two men became friends and Koppen decided to design the plane. When they failed to peddle the design to existing aircraft manufacturers, the two professors decided to produce the plane themselves. They took their own savings, interested some of their friends, and founded Helio. They rented a hanger in Norwood and put together the first plane. Business was opened with appropriate hoopla. One of the first public flights of the plane was

followed shortly by takeoffs and landings on the banks of the Charles. Bollinger flew the plane to work, landing in the parking lot behind the Harvard Business School. At one time the Cambridge City Council seriously considered setting up small commuter air strips at strategic points about the city to utilize the planes.

This admirable display of intellectual entrepreneurship and business acumen was not followed by financial success.

Just as the company was preparing to enter the civilian market, the Korean war began and Helio was unable to obtain materials needed for the planes. According to Koppen, the pair sought support from the military, and designed the Helio Courier with military specifications in mind. After the war, the air commuter idea never caught on and sales were slow. Bollinger's energetic efforts to convince the aircraft industry that STOL was a wave of the future earned him the reputation as being "something of a crackpot." He once told a Business Week reporter, "When I spoke from a 7 ft. tall. Now

instead of the sure prestige of Harvard, I find people saying that I'm a crackpot."

Luckily for Helio there was one customer with a need for the STOL capability.

In the mid 1950's, the Central Intelligence Agency foresaw a need for this type of plane. Eisenhower policymakers decided that if the U.S. were to retain a foothold deep within Laos, it would have to work with the hill tribes, bring them food and weapons in the face of Pathet Lao opposition. The majority of the potentially friendly tribes such as the Meo lived along the then inaccessible ridgelines of the mountains.

The CIA lent support to the ailing company and bought a small fleet of Helio Couriers. The planes were ideal for the CIA purposes because they flew slow enough to drop accurately the supplies necessary to construct a small landing strip. Once the strip was cleared, the Helio plane could land. Over thirty such runways were built throughout Laos. The planes brought in U.S. advisers -- Special Forces officers under CIA direction -- who organized and trained the Meos to fight with modern weapons. (This involvement proved to be disastrous for the Meo, whose army was smashed by the Pathet Lao and the North Vietnamese.)

Bollinger explained in our interview that he had served as a Kennedy advisor on small business investment in Asia. He admitted that he had visited Laos in 1961 on a matter which he did not wish to specify.

CIA activity in Laos is now a matter of public record. The bases in Laos that were established with the help of this plane have been the backbone of the CIA controlled Armee Clandestine. The Helio planes still fly throughout Laos, carrying ammunition, food, and U.S. advisors to remote mountain bases.

According to a former CIA official, the Helio plane played a similar role in building and supporting an anti-communist army in Tibet, inside of China, where during the early 1960's the CIA organized and supported a force of 40,000 men.

Bollinger said that he was in Katmandu, Nepal in 1964 and saw a couple of Helios and other foreign versions of STOL aircraft.

"I'm not saying they weren't CIA planes," he explained, "but I'm not saying there were. I did hear something vague about an airlift."

The CIA thought so highly of Helio that the Air America maintenance facility in Taiwan are tooled to produce every spare part in the plane. In fact, the shops are able to produce a completely new Helio courier.

Interestingly, the plant is operated in secret, and does not remit royalties to Helio.

Understandably Bollinger was a bit agitated at discussion of this subject. "How did you find that out?" he asked. "We get hot under the collar about these things. We would like to get some hard information about this. You can imagine how we feel."

The CIA requested Bollinger and Koppen to design and build a twin engine plane with the same slow flight and short takeoff as the Helio Courier. This twin engine plane was spectacular for its size. During an exhibition for the Army staff in Peru, it landed in a small football field in the middle of Lima. When the plane dropped below the buildings, fire engines raced across the city to put out the fire from the expected crash. They arrived in time to see the Chief of Staff of the Peruvian Army waving as he climbed out of the plane. These twins, called the U-5, have been sold only to the CIA. They have been involved in clandestine operations in all parts of the world.

Bollinger also dislikes discussing the company's CIA connection. When asked directly whether or not reports that the CIA was using his planes were correct, he said only that the "stories have the ring of truth about them" but that he really couldn't confirm them. During our first interview he denied that the company had ever produced the twin engine plane, but later he said that they had in fact produced a limited number of the planes for a Government customer. He declined to identify the Government agency.

Koppen, as the opening quote illustrates, is much more forthright. He recalled that the CIA had been a major Helio customer and that he did design the U-5 at the time. He lives on Cape Cod where we reached him by phone.

The Air Force and Army have also used Helio planes, which they designate as U-10. Pentagon purchases have accounted for over a third of Helio's sales since 1960. The planes, some of which are specially modified, have been used for forward air control and general purpose transports. In an interview Bollinger himself acknowledged that the Air Force has fitted the plane for psychological warfare by mounting speakers and flare tubes.

Another major user of the plane is the Jungle Air Radio Service of northwestern South America. According to Bollinger, their fleet of 25 planes (5 on loan from the Peruvian Air Force) is used to break up "tribal clashes" between the Auca Indians (the name means "killer", he explained) and to fly police and medicine into the heartlands of Columbia, Peru, Bolivia, and Ecuador. Mining and oil companies, government officials and missionaries have used the Helio planes for work in remote areas all about the world.

Until the recent contract appeared, prospects for Helio were bleak. When the company lost \$2,000,000 on a commercial venture last year, Bollinger retired to become a Senior research Associate at MIT. The management of the new contract, and the prospect of a much larger one on the horizon has brought him to help his old firm.

Like many of the Route 128 companies, Helio's local branch is only the research and development division of a larger operation. The production branches, which employ blue collar labor, are elsewhere. The engine is produced in Canada, and the planes are assembled in Pittsburg, Kansas.

Lately, a new domestic market has begun to open up.

Law enforcement officials are beginning to eye the plane for counterinsurgency work at home. The Dade County Public Safety Department in Florida is testing STOL planes for the Federal Law Enforcement Assistance Administration (LEAA). They purchased a plane from Helio last year. The Cornell Aeronautical Laboratory is evaluating the plane and will provide "initial guidelines to be used by LEAA in evaluating grants to procure STOL aircraft,

or mixes of helicopters and STOLs for different size jurisdictions and police purposes.

The company says it prefers civilian to military business, but that the market simply doesn't exist. Bollinger said that it would be a "travesty" for a company with "bona fide public interest objectives," such as his own, to turn down such contracts, since another, larger weapons maker would pick up the business.

Koppen doesn't trouble himself over the fact that his planes have been used for military work and by the CIA. He said, "I'm just interested in the technical side of things."

These excuses are common whenever corporate technology is criticised by the anti-war or ecology movement. To the extent that they are real, they present a problem for those who wish to go beyond moral condemnations or glib talk about "new priorities."

The vaunted technological capacity of the U.S. is nothing more than the sum of the skills of its trained manpower. The skills are shaped by the universities and industrial research labs. The priorities of these institutions are shaped by the market and the Federal grant system, both unresponsive to public needs. The system has operated to create a pool of talent which can meet the needs of the military and the favored glamour industries, but not the needs of the majority of the people. It's no surprise that the plane launched by two professors turned out to be much more useful to the military than to anyone else.

In the absence of Pentagon or CIA money, it is impossible to provide the high paying, high prestige jobs to which these men and women have become accustomed. This is a tragedy for the American people, but it is a catastrophe for the people of Indochina who live and die daily under the technological nightmare this system has created.